

REMARKS

Affirmation of Election

Applicant hereby affirms his election to prosecute claims 11-16, 18-25, and 44-51. Accordingly, Applicant has canceled claims 1-10, 17, 26-43, and 52-79. Applicant has also canceled claim 13, 19, and 46.

Specification

The Examiner has requested a new abstract because the current one does not read on the elected invention. Applicant provides herewith a new abstract of the invention which reads on the elected invention.

Claim Rejections - 35 U.S.C. § 112, Second Paragraph

The Examiner has rejected claim 15, 22, 47 and 48 as containing informalities. Applicant has amended claims 14, 22, 47 and 48 to more particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claim Rejections – 35 U.S.C. §§ 102/103

Komino

The Examiner has rejected claims 11-16, 18, 20, 22-23, 44 and 48-49 under 35 U.S.C. §102(b) as being anticipated by Komino (US Patent 5,769,952). The Examiner has rejected claims 19, 24, 45 and 50 under 35 U.S.C. §103(a) as being unpatentable over Komino as applied to claims 11-16, 18, 20, 22-23, 44 and 48-49 above, and further in view of Davis et al. (US Patent 4,816,098). The Examiner has rejected claims 21, 25, 46 and 51 under 35 U.S.C. §103(a) as being unpatentable over Komino as applied to claims 11-16, 18, 20, 22-23, 44 and 48-49 above, and further in view of Eriguchi (US Patent 6,372,082). The Examiner has rejected claim 47 under 35 U.S.C. §103(a) as being unpatentable over Komino and Davis et al. as applied to claims 19, 24, 45 and 50 above, and further in view of Eriguchi (US Patent 6,372,082). It is Applicant's understanding that Komino either alone or in combination with Davis or Eriguchi fails to teach or render obvious Applicant's invention as claimed in claims 11, 12, 14-16, 18, 20-25, 44, 45 and 47-51.

With respect to claims 11, 12, 14-16, 18, 20-25, Applicant's teach and claim an apparatus for atmospheric and sub-atmospheric processing of a wafer. The apparatus includes an atmospheric transfer chamber and a sub-atmospheric transfer chamber. Coupled to the atmospheric transfer chamber is **"an integrated particle monitoring tool for monitoring particles on a wafer surface"**.

Applicant understands Komino as describing an apparatus having a normal pressure unit 120 coupled to cleaning chambers 18a and 18c and drying chambers 18b and 18d (Col. 6, lines 7-23). Komino, however, fails to teach an integrated particle monitoring tool coupled to the normal pressure unit 120 as claimed by Applicant.

The Examiner has cited Davis et al. as teaching the use of particle counters and computing controllers. Applicant understands Davis et al. as teaching to place a particle sensor 202 in a vacuum load lock chamber 12. Davis teaches to monitor the number of particles present in the interior of the vacuum load lock. A sensor is

located down stream from the load lock 12 in a pump out path. The sensor includes a counter which counts the number of particles which flow through the pump out (Col. 24, lines 8-23). As such, David teaches to monitor the number of particles within a load lock and fails to teach an integrated particle monitoring tool which monitors particles on a wafer surface as claimed by Applicant.

Additionally, with respect to claims 18 and 20-25, Applicant teaches and claims to provide a controller which includes instructions for determining the operation of the wet cleaning module depending upon the results of the integrated particle monitoring tool. Applicant does not understand Davis et al. to teach a controller and instructions for controlling the operation of a wet cleaning module depending upon the results of the integrated particle monitoring tool as claimed by Applicant.

As such, for the above mentioned reasons, it is Applicant's understanding that Komino et al. either alone or in combination with Davis et al. fails to teach or render obvious Applicant's invention as claimed in claims 11, 12, 14-16, 18, and 20-25.

With respect to claims 44, 45 and 47-51, Applicant teaches and claims an apparatus for the formation of an electrode which includes **"an integrated thickness measurement tool"**. Komino et al. fails to teach a thickness measurement tool coupled to an atmospheric transfer chamber as claimed by Applicant. Additionally, Eriguchi also fails to teach an integrated thickness monitoring tool coupled to an atmospheric transfer chamber. Applicant understands Eriguchi as describing a CD measurement tool. A CD measurement tool measures the width of lines formed on a wafer as opposed to the thickness of a film formed on a wafer. As such, Komino either alone or in combination with Eriguchi fails to teach or render obvious Applicant's invention as claimed in claims 44, 45, and 47-51.

Fairbairn

The Examiner has rejected claims 11, 12, 14,-16, 18, 20-25, 44, 45, and 47-51 under 35 U.S.C. § 102(e) as being anticipated by Fairbairn et al. (US Patent Publication No. 2002/155629). It is Applicant's understanding that Fairbairn et al. fails to teach or render obvious Applicant's invention as claimed in claims 11-16, 18-25 and 44-51.

With respect to claims 11, 12 and 14-16, Applicant teaches and claims an apparatus for atmospheric and sub-atmospheric processing of a wafer. The apparatus includes an atmospheric transfer chamber and a sub-atmospheric transfer chamber. Coupled to the sub-atmospheric transfer chamber is **"a sub-atmospheric module which is selected from the group consisting of a CVD deposition module, a sputter module, an oxidation module and an anneal module"**. Applicant understands Fairbairn et al. to teach a sub-atmospheric transfer chamber 901 having a plurality of etchers 902 coupled thereto, as well as an ashing strip processor 909 coupled thereto. Applicant does not understand Fairbairn as teaching either a CVD deposition module, a sputter module, an oxidation module, or an anneal module coupled to the sub-atmospheric transfer chamber 901. As such, Fairbairn et al. fails to teach or render obvious Applicant's invention as claimed in claims 11, 12, and 14-16.

With respect to claims 18 and 20-25, Applicant teaches and claims an apparatus for etching and cleaning a wafer which includes a controller for controlling a wet cleaning module wherein the controller includes stored instructions for determining the operation of the wet cleaning module depending upon results from an integrated particle monitoring tool. Applicant does not understand Fairbairn et al.

to teach a controller having instructions which utilize the results of the integrated particle monitoring tool 910 to control the wet cleaning apparatus 911. As such, Fairbairn et al. fails to teach Applicant's invention as claimed in claims 18 and 20-25.

With respect to claims 44, 45, and 47-51, Applicant teaches and claims an apparatus for the formation of an electrode which includes an integrated thickness measurement tool coupled to an atmospheric transfer chamber. Applicant does not understand Fairbairn et al. to teach an integrated thickness measurement tool coupled to an atmospheric transfer chamber. As such, Fairbairn et al. fails to teach Applicant's invention as claimed in claims 44, 45, and 47-51.